Strategic Plan for the Prevention of Obesity in Texas

February 2003

Statewide Obesity Taskforce

Strategic Plan

for the

Prevention of Obesity

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Contents

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Executive Summary

Executive Summary

An epidemic of obesity has become one of the most important health problems facing Texas today. Its prevalence is growing rapidly, and no one can predict when this increase will level off. Besides being a health problem in itself, obesity contributes to many other dangerous conditions such as diabetes and coronary heart disease. Obesity also contributes to emotional problems such as low self-esteem and depression. Health problems associated with obesity burden not only the health-care profession, but also the workplace. An effective Strategic Plan on the Prevention of Obesity in Texas will address these problems in a manner that takes into account the demographic diversity of its people, and the urgency of making obesity awareness and prevention a part of daily life.

Vision:

All Texans have a healthy weight through physical activity and healthful eating.

Mission:

To reduce the burden of weight-related disease by decreasing the prevalence of obesity.

Goal 1:

Increase awareness of obesity as a public health issue that impacts the quality of life of families.

Objective 1: Identify, develop, and disseminate messages and materials regarding obesity and its impact on quality of life.

Goal 2:

Mobilize families, schools, and communities to create opportunities to choose lifestyles that promote healthy weight.

Objective 1: Identify and evaluate existing plans and activities that promote healthful eating habits and physical activity.

Objective 2: Develop, implement, and evaluate plans and activities that promote healthful eating habits and physical activity.

Goal 3:

Promote policies and environmental changes that support healthful eating habits and physical activity.

Objective 1: Increase advocacy for initiatives and policies that support healthful eating habits and physical activity.

Goal 4:

Monitor obesity rates and related behaviors and health conditions for planning, evaluation, and dissemination activities.

Objective 1: Create a system for data collection, monitoring, and reporting activities.

Objective 2: Implement data-management systems that assure quality and consistent data.

Foreword

Call to Action

Foreword

On October 1, 2000, the Texas Department of Health received a three-year grant from the Centers for Disease Control and Prevention to support state nutrition and physical activity programs to prevent obesity and related chronic diseases in Texas. One of the planning activities funded by this grant was the formation of a Statewide Obesity Taskforce to develop a strategic plan to address the problem of obesity in Texas. The taskforce members represent a breadth of organizations — from research institutes to community-based organizations serving diverse populations — and a variety of geographic areas of Texas.

The Statewide Obesity Taskforce developed this document during 2001–2002, beginning with an assessment of Texas data and existing interventions and initiatives addressing obesity prevention and treatment. Based upon this assessment, the taskforce decided to focus the plan on preventing obesity in children. This focus was expanded to include families with children because adult family members have great influence over their children's diet and physical activity. The taskforce also decided that a focus on prevention, rather than treatment, would be more successful in reducing obesity in Texas because treatment is very difficult and in most cases unsuccessful.

During the strategic plan's development, the taskforce recognized a need to gather input and gain support from partners at the community and state levels. By gathering such input, the taskforce would help ensure the integrity of the final plan and the feasibility and acceptability of its implementation.

To gather community perspective, 10 community forums were conducted across the state in spring 2002. Locations (San Marcos, Round Rock, Dallas, Houston, El Paso, Lubbock, Falfurrias, San Antonio, Waxahachie, and Palestine) were chosen as representative of rural, suburban, and urban areas. Invitations were sent to community leaders and active community members. Some participants were nontraditional partners such as local business owners, church leaders, chambers of commerce, and urban planners.

To enlist the comments of state-level partners, the taskforce held a stakeholders' meeting on August 8, 2002. Of 260 partners invited, 101 attended a half-day meeting where a brief presentation of the plan was given. Most of the time was spent gathering comments about the draft plan, which the taskforce reviewed before making final revisions to the plan.

On February 13, 2003, this plan will be released at the statewide professional conference *Promoting Healthy Weight in Texas* in San Antonio and at a press conference. The plan will be presented as recommended strategies to begin reversing the obesity epidemic. Research and a consideration of the best public-health practices will be presented during the professional conference.

Call to Action

This *Strategic Plan for the Prevention of Obesity in Texas* is intended as a springboard for action. It is not meant to detail all of the steps necessary for its implementation. A Statewide Obesity Steering Committee will be formed to build on the momentum created by the plan. The steering committee will activate state- and community-level organizations to identify strategies in the plan for which they can assist in taking responsibility. In addition, the steering committee will facilitate the development of partnerships, monitor the implementation of the plan, and make recommendations for plan revisions. With the steering committee as lead entity, subcommittees will be formed around each of the plan's four goals.

None of this work precludes organizations or individuals from implementing some or all of the strategies. The steering committee welcomes information from other groups and welcomes their participation. We will have to work together to achieve our vision of all Texans having a healthy weight.

Background Paper

Background

Obesity is epidemic and has become one of the most important health problems facing Texas today. More than 61 percent of Texas adults and 35 percent of Texas school-age children are considered overweight or obese (1, 2). The prevalence of obesity is growing rapidly (3), and no one can predict when this increasing prevalence will level off (4). Though some might simply wish to redefine "normal" weight based on the large proportion of Americans who now weigh more than in years past, obesity must be considered a disease because it is accompanied by the most common and costly medical problems treated today. Diabetes, arteriosclerosis, hypertension, hyperlipidemia, steatohepatitis, sleep apnea, breast cancer, gastroesophageal reflux, osteoarthritis, and aseptic necrosis of the hip are just some of the health problems associated with obesity. Many overweight adults and most overweight children have low self-esteem, and a large number are depressed (5). The diseases associated with obesity are increasing at the same rate as obesity itself (6, 7), and doctors are finding it harder and harder to keep up with the demand for therapy for such problems. Health problems associated with obesity burden not only the health-care profession, but also the workplace, causing absenteeism and inefficiency (8). Beyond being a problem of individuals, obesity has become a problem for society.

Obesity is epidemic and has become one of the most important health problems facing Texas today.

The treatment of obesity is very difficult and in most cases unsuccessful. Even the best therapeutic programs produce only a modest weight loss of 5 to 10 percent of pretreatment weight. Long-term success is much poorer, with most patients drifting back to their pretreatment weight or higher (9). Researchers continue to search for medications that are successful in the treatment of obesity, but to date effective drugs do not exist. Surgery, which is limited to those suffering significant life-threatening complications of obesity, is expensive, not without risk, and not always successful (10). Even if the optimal medical or surgical therapy for obesity were discovered, it would be impractical and expensive to treat the huge numbers of obese persons.

The American public has grown increasingly aware of the rise in obesity, mainly due to national media reports; however, the association between being overweight or obese with particular health problems, and the causes of overweight or obesity, are not well understood. In 2000, a national survey found that only 28 percent of adults could correctly identify obesity as a risk factor associated with heart disease and heart attacks (11). Although most adults are now generally aware that heart disease and even diabetes are influenced by overweight and obesity, a recent poll of

1,025 people showed that only 25 percent recognized the link with cancer, with just 6 percent identifying overweight and obesity as a major risk factor for these chronic diseases (12). In two separate surveys of adults in the United States, only one-quarter to one-half of the respondents reported that lack of physical activity and poor food choices are major causes of children being overweight. Both the general public and health professionals agree that children do not get enough physical activity because they watch too much television, play too many video games, and spend too much time on the Internet (13, 14). In a nationwide survey of more than 1,000 parents' attitudes about childhood obesity, only 5 percent correctly identified obesity — in comparison to violence, illegal drugs, smoking, alcohol, and sexually transmitted diseases — as the greatest threat to the long-term health of their children. In that same poll, however, more than 30 percent of the parents were either "somewhat" or "very" concerned about their own children's weight (15).

There are also cultural, racial, and ethnic differences in attitudes and beliefs concerning obesity. African-American and Mexican-American youth have different perceptions about "healthy weight" compared with white children, and parental influence is not uniform across cultures. In one study of focus groups composed of 98 African-American, Mexican-American, and white eighth- and ninth-grade students, Mexican-American youth reported their parents to be less likely to encourage healthful eating habits than parents of other ethnic groups (16).

In preventing obesity, the easiest and most logical group to start with is children.

In preventing obesity, the easiest and most logical group to start with is children, since childhood obesity is a precursor of adult obesity. A child who is overweight at age 12 has a 75 percent chance of being overweight as an adult (17) — a sobering figure for, when the adults of today were children the prevalence of overweight among those children was less than 15 percent. If society doesn't identify effective ways to prevent this disease in the present generation of children, prospects are grim for the adults of the future. This document outlines some initial steps toward decreasing the prevalence of obesity in Texas through prevention.

Definitions of *overweight* and *obese*

Many synonyms for *overweight* are found in the literature, including such terms as *at risk of overweight, overweight, obesity, morbid obesity and super obesity*. For the purpose of this document only two terms, *overweight* and *obesity,* will be used. Until recently, there was not a standard definition of "normal" weight in the adult or pediatric populations, and this created a problem for physicians and other health-care providers, particularly those who cared for children. Providers had to use personal judgment to determine if an individual was overweight. The Body Mass Index now

provides a guideline for weight in relation to height and has gained acceptance as the standard measure for overweight and obesity for both children and adults (18). BMI is defined as weight in kilograms divided by the square of height in meters (kg/m^2). BMI can also be obtained by dividing the weight in pounds by the square of height in inches (lbs/in^2) and then multiplying by 703.

In adults, a BMI of at least 25 and no greater than 29.9 is considered overweight, and a BMI greater than or equal to 30 is considered obese. In contrast with adults, children grow in height as well as weight. Therefore, the norms for BMI change with age and vary with gender. In 2000, the National Center for Health Statistics and the Centers for Disease Control and Prevention published BMI reference standards for children ages 2 to 20 (19). For the purpose of this report, *overweight* is defined as having a BMI at or above the 85th percentile to less than the 95th percentile on these reference standards for age and gender. *Obesity* is defined as having a BMI at or above the 95th percentile. This terminology was chosen so that similar definitions are used for both children and adults.

Obesity in adults

In 2001, 36.7 percent of adult Texans were overweight and 24.6 percent, obese — as compared with 1990, when only 30.6 percent of adult Texans were overweight and 12.3 percent, obese. (See Appendix A.) This dramatic rise in obesity is both surprising and alarming. The question of when this rise might level off remains unanswered.

The increase in the number of obese persons is causing a significant increase in health-care costs in Texas and across the United States.

The increase in the number of obese people is causing a significant increase in health-care costs in Texas and across the United States. Then-U.S. Surgeon General David Satcher reported that 300,000 Americans died in 2001 from obesity-related causes, and the United States spent $117 billion in obesity-related outlays (20). In a study of 1 million members of managed-care organizations in the United States, obesity was linked to 45 percent of the 132,900 cases of hypertension, 85 percent of 58,500 cases of type 2 diabetes, 18 percent of 51,500 cases of hypercholesterolemia, and 35 percent of 16,500 cases of coronary heart disease (21). When the obesity components of gallbladder disease, stroke, osteoarthritis of the knee, and endometrial cancer are added to this list, health-care costs attributable to obesity for these eight diseases were estimated to total $345.9 million annually for these 1 million consumers. Recently, the increased medical costs associated with obesity were compared with the increased medical costs from smoking and problem drinking (22, 23). The cost of both outpatient and inpatient care for current smokers is 21 percent more than for nonsmokers, whereas the obese show a 36 percent cost increase when compared with people of normal weight. Medication costs increase by 28 percent in smokers, but

the increase for obesity is far larger at 77 percent. The effect of problem drinking on medical costs is even less than that of smoking; thus obesity is even more costly than problem drinking. This study also showed that the medical costs of an obese 30-year-old are equivalent to the medical costs of a 50-year-old of normal weight. The best estimate of medical costs of obesity to Texas is approximately $4 billion — a conservative estimate, since obesity is underdiagnosed because most health-insurance providers do not reimburse for diagnosis or treatment of weight-related conditions (8, 24).

The treatment of obesity in adults is both expensive and difficult at best. In 1999, Americans spent $321 million on prescription medicines to treat obesity and perhaps at least as much on nonprescription herbal and dietary supplements (25, 26). Treatment programs based on behavior modification, exercise, and diet abound. It is estimated that the American public spends up to $50 billion a year on diet and weight-loss products (27). Even among the most motivated people, these products and treatments result only in a modest weight loss. The average person only loses about 5 to 10 percent of body weight from existing, conventional therapies. This amount of weight loss can have a significant effect on many of the health problems associated with obesity; unfortunately, the weight lost is frequently regained in a year or two (28). Bariatric surgery results in considerable weight loss but comes with considerable risk as well as cost (29). Even if surgery were perfectly safe and affordable to the average person, not enough surgeons are available in the United States to provide this care to all who need it. Currently, bariatric surgery is restricted to those with a BMI of greater than 40 and those who have significant comorbidities.

Over the last 10 years, the prevalence of overweight and obesity in children has dramatically increased.

There is a great need for an effective therapy for obesity, and a significant amount of research is directed to this area. However, whether or not effective therapies exist, the best way to deal with the problem of obesity is to prevent it.

Obesity in children and adolescents

Over the last 10 years, the prevalence of overweight and obesity in children has dramatically increased. In 1990, data from the National Health and Nutrition Examination Survey revealed that 22 percent of American children between the ages of 16 and 18 were overweight or obese (30). The most recent NHANES data, collected in 1999–2000, indicate that the prevalence of overweight or obesity is 20.6 percent in children ages 2 to 5 years, 30.3 percent in children ages 6 to 11 years, and 30.4 percent in children ages 12 to 19 years (31). As in adults, the prevalence of overweight is higher among Mexican-American and non-Hispanic Black children compared with white children.

In general, the prevalence of childhood overweight and obesity was greater in Texas in 2001 than was reported for the national NHANES sample. The overall prevalence of overweight in Texas schoolchildren was 38.7 percent for fourth-graders, 37.1 percent for eighth-graders, and 29.4 percent for eleventh-graders. The prevalence of childhood obesity was also greater in Texas: The overall prevalence of obesity in fourth-grade students in Texas (32) was almost 1½ times as high as that reported for the United States in general (31). The highest prevalence of overweight was reported for Hispanic boys at all grade levels and African-American girls in the fourth and eleventh grades. (See Appendix B.)

In recent years, seven additional studies were completed in Texas that measured both the height and weight of children so that BMI could be calculated (33–39). These studies represent different geographic areas of Texas and are summarized in the table in Appendix C. In this table, children (< 12 years) are separated from adolescents (≥ 12 years). Where the data existed, gender and race are reported separately. Only one database (40) describes children younger than 5 years of age.

As shown in Appendix C, the prevalence of obesity in low-income children ages 2 to 5 years is now 14.0 percent. When these children reach school age, it is anticipated that many more will become obese, far surpassing the present rate of obesity in children.

Non–insulin-dependent diabetes mellitus, or type 2 diabetes, is the most common disease associated with obesity in children. In one recent study, 25 percent of obese children and 21 percent of obese adolescents had evidence of impaired glucose tolerance (41), a symptom that predicts the development of diabetes as well as cardiovascular disease. If 20 percent of Texas children are now classified as obese, 5 percent of all children in Texas are most likely developing symptoms of diabetes. This statistic is profound considering that two decades ago type 2 diabetes was deemed an adult disease and was rarely seen in childhood. Diabetes has a detrimental impact on the health of children. In a recent review of mortality and survival from type 2 diabetes, the reduction of life expectancy in a child who developed this disease before the age of 15 was 27 years, and 23 years if the disease developed between 15 and 19 years of age (42). If nothing is done to stop this epidemic of obesity, children of this generation, on average, are unlikely to live as long as their parents.

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Other potentially fatal diseases, including steatohepatitis, are now being seen regularly in children. Data do not exist on the prevalence of steatohepatitis, but some weight-loss clinics for children have seen abnormal liver enzymes in as many as 10 percent of the children referred. Sleep apnea, hypertension, hyperlipidemia, depression, osteomalacia of

the hip and knee, gallbladder disease, and gastroesophageal reflux are now being seen with regularity in obese children and adolescents (42, 43).

A recent study from the CDC attempted to evaluate the economic burden of obesity in children between the ages of 6 and 17 (44). Three health problems associated with obesity — diabetes, sleep apnea and gallbladder disease — were studied. Results from the National Hospital Discharge Survey (1979–99) showed (based on discharge rates) a doubling of diabetes, a tripling of gallbladder disease, and a fivefold rise in sleep apnea. Asthma and some mental disorders were the most common principal diagnoses when obesity was listed as a secondary diagnosis. Obesity-associated annual hospital costs (based on a 2001 constant U.S. dollar value) for the three diseases studied increased more than threefold, from $35 million during 1979–1981 to $127 million during 1997–99 (45).

The treatment of obesity in children is just as ineffective as in adults (46, 47, 48). The Food and Drug Administration has not approved any obesity drugs for children, though several clinical trials are now ongoing in the United States (4). Bariatric surgery is not recommended for children (49). The only form of treatment that is recommended is behavior modification regarding diet and exercise, but this form of therapy is labor intensive and costly. The most comprehensive weight-loss program for children in Texas has had limited success in reducing weight. Only one out of five children referred to this program actually finished it and, even though those who finished lost weight, many quickly gained it back (50).

A much more logical approach to weight control in childhood is prevention. Until enrollment in school, a child's weight reflects the eating and activity environment provided by the child's parents and child-care providers. While in school, a child can be influenced by what is taught about food, meals served, and activity encouraged. It is generally recognized that habits developed early in life have a profound influence on activities later in life. Studies done several decades ago have shown that a child who was overweight at 6 years of age had a 25 percent chance of being overweight as an adult. A child who was overweight at 12 years of age had an even greater risk (75 perecent) of being overweight as an adult (51). Our current environment may have a greater negative effect on children's weight, thus raising their risk of becoming obese adults. If the epidemic of childhood obesity cannot be averted, its full public-health effect won't be felt until today's children reach adulthood.

Specific Strategies

Specific Strategies

Goal 1:

Increase awareness of obesity as a public health issue that impacts the quality of life of families.

Objective 1.

Identify, develop, and disseminate messages and materials regarding obesity and its impact on quality of life.

Strategy 1

Develop a culturally sensitive, long-term, statewide social-marketing campaign to raise professional, family, and public awareness of the obesity epidemic and its effect on health and quality of life.

Why?

To develop and disseminate a coordinated program of educational materials, workshops, and public-service announcements to appropriate target audiences.

How?

Establish a statewide committee to serve as a means of coordination for:

(1) establishing guidelines from best practices for increasing awareness;
(2) establishing social-marketing standards for developing and implementing tools, materials, programs, and messages to appropriate target audiences; and
(3) developing and coordinating a systematic method of distributing tools and messages.

Who is the target?

Parent-teacher associations (PTAs), parents, teachers, the health-care industry, public health organizations, health-care providers, the medical community, schools, professional organizations, community groups, the private sector, and the corporate community.

Desired effect on the target

Increased public awareness of obesity as a serious public health problem. Increased awareness by individuals about the potential health problems of obesity and being overweight. Body Mass

Index (BMI) is institutionalized as a health-evaluation tool and a high score on this measure is widely understood to be a major risk factor for disease. The public will become familiar with adult BMI standards and growth charts for children and adolescents.

Evaluation methods

Compilation of a list of trained staff and taskforce members. Message testing. Media kit to be tested with the targeted population. Follow-up by phone. Continual monitoring of broadcast messages about obesity. Compilation of a list detailing promotional efforts of these programs at the state, regional, and local levels.

Data needed to measure outcomes

Quantitative data: a statewide survey of attitudes and beliefs. Qualitative data.

Resources needed

Ideally, the tools would be part of a coordinated program designed to deliver a consistent message through a variety of media to diverse populations and organizations. The steering committee would oversee the development of the following tools:

- Media messages and materials (PSAs, press releases, etc.)
- Workshops for health-care professionals
- Tools for health-care professionals, such as scale hangers, brochures and handouts, posters for exam rooms, assessment tools, and program notes
- Materials for schools: posters, fact sheets, and curricula
- Public forums and workshops
- Self-assessment tools for the general public
- Health fairs: knowing one's weight-related health risk

The content of these tools will center on three key areas:

(1) Health risks of obesity
(2) The status and increasing prevalence of obesity in Texas
(3) Understanding weight-related health risks and knowing one's BMI

Note: For other goals, similar strategies and tools can be developed — messages and programs designed for interventions regarding eating and physical-activity habits of Texans, and education and lobbying of public officials and legislative groups. Again, this speaks to the importance of having a statewide steering committee overseeing the plan's implementation.

Goal 2:

Mobilize families, schools, and communities to create opportunities to choose lifestyles that promote healthy weight.

Objective 1. (Families)

Identify and evaluate existing plans and activities that promote healthful eating habits and physical activity.

Strategy 1

Determine existing plans and activities that are currently effective with families to promote healthful eating habits and physical activity.

Why?

To see what is feasible and what can be recommended to families as "first steps", i.e., those behaviors that may be easiest to achieve so that many families can ultimately participate in the recommended activities and succeed.

How?

Focus groups and interviews. Use existing resources to develop focus-group questions.

Who is the target?

Adults and youth in families.

Desired effect on the target

None intended except, perhaps, awareness.

Evaluation methods

Identification of themes using social-marketing research.

Resources needed

(1) Participants to sample
(2) Funds for subject participation
(3) Volunteer researcher or funds to pay researcher to conduct social-marketing research

Objective 2. (Families)

Develop, implement, and evaluate plans and activities that promote healthful eating habits and physical activity.

Strategy 1

Develop recommendations of plans and activities that families can implement to promote healthful eating habits and physical activity.

Why?

To provide tangible, straightforward recommendations that families can identify with, easily access, and adopt.

How?

Develop an inventory of food habits and physical activity using social-marketing research methods. The inventory will serve as an assessment tool and an intervention tool. For example, the inventory could include such items as "family meals are eaten together at least __ times per week; watching TV is limited to ____ hours per day," etc.

Who is the target?

Adults and youth in families.

Evaluation methods

Pretesting with a sample of families (both adult and youth family members). Results will be used to revise inventory.

Strategy 2

Implement and evaluate inventory in selected communities (pilot testing).

Why?

To determine feasibility, appropriateness, and impact.

How?

Ask partners to identify communities (and families within those communities). Families will take self-assessment inventory to identify areas that they could change. Depending on the inventory item, the families could be referred to educational material that would be given to them via handouts or mailouts or Web sites.

Who is the target?

Adults and youth in families.

Desired effect on the target

Awareness, commitment (goal setting) to changing eating habits and physical activity selected by the family.

Evaluation methods

Use inventory for self-assessment by the family of their eating habits and physical activity at baseline and again following intervention.

Resources needed

(1) Participants to sample

(2) Funds for participation

(3) Volunteer researcher or funds to pay researcher for evaluation of results

(4) Data-management software for recording and tabulating responses

(5) Staff or partners for recruitment of families and distribution and collection of inventories

Objective 1. (Schools)

Identify and evaluate existing plans and activities that promote healthful eating habits and physical activity.

Strategy 1

Evaluate existing school-based nutrition and physical-activity policies and programs.

Why?

To provide an opportunity for administrators, staff, parents, and students to get involved and work together to create a healthier school environment.

How?

Use the Centers for Disease Control and Prevention's *School Health Index for Physical Activity and Healthy Eating: A Self-Assessment and Planning Guide* (52).

Who is the target?

Prekindergartens, Head Start centers, schools, and day-care centers.

Desired effect on the target

Identification of strengths and weaknesses of health-promotion policies and programs. Development of an action plan, involving teachers, parents, students, and the rest of the community to improve school services.

Evaluation methods

Progress report on school-health index assessment in Texas schools.

Objective 2. (Schools)

Develop, implement, and evaluate plans and activities that promote healthful eating habits and physical activity.

Strategy 1

Develop an action plan on physical activity and nutrition in Texas schools.

Why?

To create a healthier school environment by increasing awareness, knowledge, and activities regarding healthful eating habits and physical activity.

How?

Use the CDC *School Health Index for Physical Activity and Healthy Eating: A Self-Assessment and Planning Guide.* Identify ways to support compliance with the 30 minutes of daily, or 135 minutes of weekly, physical activity mandated in Texas Senate Bill 19 (77th Legislative Session). Evaluate school policies and procedures concerning lunch periods and time before recess. Create a cafeteria environment conducive to healthful eating choices and behaviors. Develop consistent and ongoing messages for school cafeterias that promote healthier eating choices. Create positive message about nutrition, increase awareness of nutrition, and improve dietary choices. Identify new ways to fund extracurricular activities other than vending machines with nonnutritive choices. Use schools that have sucessfully implemented Texas Education Agency (TEA)

–approved coordinated school-health programs to recruit and mentor other schools. Provide incentives to schools for implementing a TEA-approved coordinated school-health program.

Who is the target?

Prekindergartens, Head Start centers, schools, and day-care centers.

Desired effect on the target

Each school will implement a plan for physical activity and nutrition. Monitoring of prevalence of obesity among children in Texas.

Evaluation methods

Progress report on school-health index assessment in Texas schools.

Strategy 2

Establish alliances between schools, health organizations, and communities.

Why?

To identify specific needs of schools and communities. Coordinate activities that promote healthful eating habits and physical activity.

How?

Create partnerships between school-health advisory committees, PTAs, and key community stakeholders. Coordinate activities between universities offering nutrition and/or exercise programs and elementary schools. Universities may develop training programs for teachers to implement curricula. Use pilot schools to test and promote curricula. Establish after-school programs that promote healthful eating habits and physical activity. Coordinate and implement recreational activities for children.

Who is the target?

Prekindergartens, Head Start centers, schools, and day-care centers.

Desired effect on the target

Coordination of efforts toward healthier communities. Increased involvement and collaboration among schools and the community.

Evaluation methods

Summary of alliances, action plans, and activities implemented.
Monitoring of prevalence of obesity among school-age children.

Strategy 3

Educate school administrators, teachers, and PTA members on the positive relationship between nutrition, physical activity, and academic performance.

Why?

Administrators, teachers, and PTA members may not understand the link between healthful eating habits, physical activity, and learning; therefore, they may not view these as priorities.

How?

Make use of local health experts to address school boards, superintendents, PTAs, and other interest groups.

Who is the target?

School boards, superintendents, principals, PTAs, and policy makers.

Desired effect on the target

Increase knowledge of the desired behavior, and relate it to academic performance.

Evaluation methods

Number of trainings and number of attendees per training.

Resources needed
CDC's *School Health Index Manual*, personnel to track evaluation, knowledgeable and credible speakers on healthful eating habits and physical activity.

Objective 1. (Communities)

Identify and evaluate existing plans and activities that promote healthful eating habits and physical activity.

Strategy 1

Identify existing communities that are coordinating efforts.

Why?

To determine existing programs that address healthy eating and physical activity.

How?

Community inventory.

Who is the target?

Community members and organizations.

Desired effect on the target

Identification of existing programs, and their strengths and weaknesses.

Evaluation methods

Assessment based on results of inventory.

Objective 2. (Communities)

Develop, implement, and evaluate plans and activities that promote healthful eating habits and physical activity.

Strategy 1

Establish coalitions to develop, implement, and evaluate a community action plan that addresses nutrition and physical activity.

Why?

To improve community infrastructure to promote change.

How?

Mobilize local task forces. Make use of existing coalitions. Conduct town-hall meetings. Encourage ongoing communication between private and public organizations and child, youth, and family-planning services. Make existing community resources available to all people. Conduct community-based classes that include demonstrations on menu planning and food preparation.

Who is the target?

Businesses, parks and recreation organizations, hospitals, and schools.

Desired effect on the target

Cooperation in looking at environmental changes. Advocacy and support for environmental change (accessible walking trails, access to healthful food options, safety issues addressed, etc.).

Evaluation methods

Identification and feasibility assessment of areas for change.

Goal 3:

Promote policies and environmental changes that support healthful eating habits and physical activity.

Objective 1.

Increase advocacy for initiatives and policies that support healthful eating habits and physical activity.

Strategy 1

Work with state legislators, advocacy groups, local policy makers, and businesses to enhance advocacy for environmental and policy changes that support healthful eating habits and physical activity.

Why?

Enforceable laws and regulations seem to be needed to solve a public-health problem that has not been solved through motivational campaigns that rely on voluntary compliance.

How?

Identification of:

- effective state, national, and international legislation and policies that promote healthful eating habits and physical activity;
- key state legislators who will work on and sponsor bills for Texas and who are informed of effective legislation and policy; and
- advocacy groups who will cooperate in this effort and be informed of plan recommendations.

Who is the target?

Legislators, advocacy groups, state and local policy makers, and businesses.

Desired effect on the target

Increased knowledge and behavior change. More members of target groups supporting environmental and policy changes.

Evaluation method

A tracking system for legislative and policy changes that address healthful eating habits and physical activity.

Data needed to measure outcomes

Tracking of changes in legislation and policies enacted over time.

Resources needed

Legislation affecting schools

(a) California Senate Bill 19 (2001) as a model for healthy school nutrition and physical activity. This legislation sets standards for meal composition, including a limit of 35 percent of calories from fat for any food item except nuts or seeds, no more than 10 percent of calories from saturated fat, and no more than 35 percent sugar by weight, except as naturally occurring in fruit and vegetables. It also limits drink sales in elementary schools to milk, water, or fruit juice. In middle schools, soft drinks may be sold only after the last lunch period. Administrative and funding guidelines are also specified. Three-year pilot programs are to be conducted before statewide implementation.

(b) Extension of Texas Senate Bill 19 (77th Legislative Session) to

(1) mandate comprehensive school health in grades K–12,

(2) add monitoring and compliance, and

(3) provide training for staff at school districts and individual schools.

(c) The Center for Health Improvement's Health Policy Coach (53) provides numerous recommendations, including:

- an emphasis on lifelong fitness activities;
- integration of community physical-activity resources into the curriculum (e.g., tennis clubs);
- four years of physical education as a requirement for the high school diploma;
- inclusion of programs that involve parents in health-related activities at school; and
- establishment of family-health resource centers that can use school facilities after hours.

Legislation affecting communities

(a) Initiate public policies that fund innovative community projects that promote physical activity and healthful eating.

(b) Provide a tax break for developers for providing healthy environments (e.g., walking or bicycle paths, tennis courts, swimming pools, etc.).

Legislation affecting businesses

Reward local small-business owners with tax breaks for supporting local schools with initiatives involving healthful eating and physical activity. This could lead to reduced school taxes.

Strategy 2

Work with insurance regulators and insurance companies to enhance advocacy for initiatives and policies that support healthful eating habits and physical activity.

Why?

Insurance incentives appear to be needed to help solve a public-health problem that has not been solved through motivational campaigns that rely on voluntary compliance.

How?

Identify effective strategies used to work with insurance-company programs and policies. Assess Texas insurers' policies. Talk with advocacy groups with a view to collaboration on influencing insurance companies. Consult with insurers to recommend changes.

Who is the target?

Insurers and the agencies that regulate them.

Desired effect on the target

Insurance companies will initiate new policies and programs that provide incentives to individuals to adopt more healthful lifestyles, and to companies for efforts to promote health among employees.

Evaluation method

Periodic surveys of insurance companies.

Data needed to measure outcomes

Insurance-industry policies and programs. Insurance companies' interest in and commitment to programs and policies that promote healthful eating habits and physical activity.

Goal 4:

Monitor obesity rates and related behaviors and health conditions for planning, evaluation, and dissemination activities.

Objective 1.

Create a system for data collection, monitoring, and reporting activities.

Strategy 1

Establish an advisory panel to identify the components that would be required for standardizing data collection, monitoring, and reporting that is related to obesity in Texas based upon current research activities in Texas and CDC recommendations for survey and surveillance activities.

Why?

To achieve consensus on the definition of elements for a standardized surveillance model for the state.

How?

Establish a job description and timetable for the panel.

Who is the target?

Researchers throughout the state who currently collect a variety of data related to obesity.

Desired effect on the target

Consistency across the state on components of data surveillance.

Evaluation methods

Review of minutes from panel meetings. Creation of a data dictionary.

Data needed to measure outcomes

A list of those nominated to the panel.

Strategy 2

Develop model protocols and training sessions for data collection that are adaptable for all public health regions.

Why?

To achieve consistency in confidential data-collection methods that are adaptable to needs of stakeholders, yet comparable across the state.

How?

(1) Texas Department of Health staff will create models based on criteria identified.
(2) TDH will conduct three training sessions annually on model adaptability and use.

Who is the target?

Local and state health authorities throughout Texas.

Desired effect on the target

Inclusion.

Evaluation methods

Survey of stakeholders on implementation and documentation of data reported to TDH.

Data needed to measure outcomes

Samples of effective models. A reproducible document that includes protocols. Data collection and reporting to TDH.

Strategy 3

Create protocol models for aggregate data reporting to targeted audiences.

Why?

To ensure surveillance of behaviors and health conditions related to obesity rates.

How?

(1) Identify key TDH staff to collate, analyze, and confidentially report data collected.
(2) Prepare four targeted types of reports for dissemination or access on the Web site.

Who is the target?

Researchers, stakeholders, media, and the public.

Desired effect on the target

Access to data for monitoring progress in decreasing obesity rates and in setting agendas for intervention.

Evaluation methods

Methods for reporting to be prepared and disseminated on the Web site and in other formats.

Data needed to measure outcomes

Samples of working formats to be posted on the Web site and available in print.

Objective 2.

Implement data-management systems that assure quality and consistent data.

Strategy 1

Assign responsibilities in the system to achieve goals.

Why?

To allocate specific responsibilities to adequately manage obesity data for collecting, monitoring, and reporting.

How?

Submit to the Legislative Budget Board a request for additional funding to support needs on an ongoing basis.

Who is the target?

The Texas Legislature.

Desired effect on the target

Appreciation of fiscal requirements to meet the needs of data management for collection of obesity data.

Evaluation methods

Availability of resources adequate to meet data-collection needs.

Data needed to measure outcomes

An outline of existing personnel and resources, an outline of needs, and a rationale for each need.

Strategy 2

Collect and submit a standardized set of obesity data to TDH as identified in the plan for data collection and implementation.

Why?

To collect standardized data on obesity for submission to TDH.

How?

Implement of a timetable and instructional guidelines for submission of data, and establish a resource core of three TDH employees for consultation with stakeholders to assist in data collection.

Who is the target?

Regional and local health authorities and stakeholders involved in interventions.

Desired effect on the target

Ongoing state realization of the standardized submission of obesity data and the opportunity to monitor changes over time.

Evaluation methods

Data submission according to the implementation schedule.

Data needed to measure outcomes

Instructional guidelines, timetables, and data collected and documented according to plan.

Strategy 3

Appoint a manager to supervise ongoing collection and distribution of data on obesity.

Why?

To monitor the effectiveness of state initiatives to realize the state plan to address obesity.

How?

Develop a job description for, and hire a manager subsequent to a search.

Who is the target?

Stakeholders and the Legislature.

Desired effect on the target

Assignment of responsibility to assure that activities and results are managed effectively and efficiently.

Evaluation methods

Annual job-performance evaluations.

Data needed to measure outcomes

Reports and systems.

Strategy 4

Conduct quality-assurance audits of data collection, analysis, and reporting.

Why?

To maintain accuracy and integrity of data.

How?

Appoint a team (three to four persons) from another state to conduct an audit every two years on systems for data collecting, management, and reporting.

Who is the target?

Data-management personnel, stakeholders, and legislators.

Desired effect on the target

Confidence in the system's integrity.

Evaluation methods

Team reports and response plans.

Data needed to measure outcomes

Reports and systems.

Glossary

References

Glossary

aseptic necrosis — Morphological change indicative of cell death in the absence of bacterial infection.

community — A body of individuals with common interests.

comorbidity — The simultaneous occurrence of two diseases or disorders in a given population.

family — A group of people within a common household.

health — Condition of physical, mental, and emotional well-being, free from disease and pain.

healthy weight — *See Background section for definition.*

hypercholesterolemia — An excess of cholesterol in the blood.

hyperlipidemia — Generic term for an excess of one or more lipids (fatty substances) in the blood.

physical activity — Any bodily movement produced by skeletal muscles that results in energy expenditure; may include both occupational and leisure physical activity.

public health — An effort organized by society to protect, promote, and restore the people's health through the application of science, practical skills, and collective actions.

quality of life — In relation to health, quality of life is the gap between our expectations of health and our experience of it.

social marketing — The application of commercial marketing technologies to the analysis, planning, execution and evaluation of programs designed to influence voluntary behavior of target audiences in order to improve their personal welfare and that of their society.

stakeholders — People and organizations who have a vested interest in identifying and addressing a problem.

steatohepatitis — A liver inflammation found in alcoholics; also a similar condition (*nonalcoholic steatohepatitis*) of uncertain origin.

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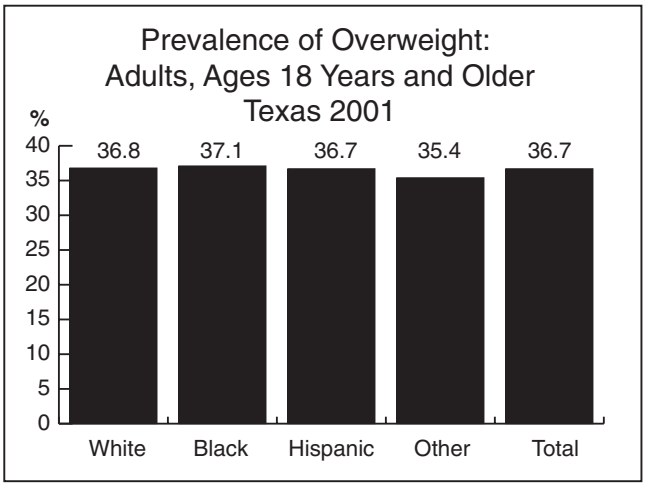
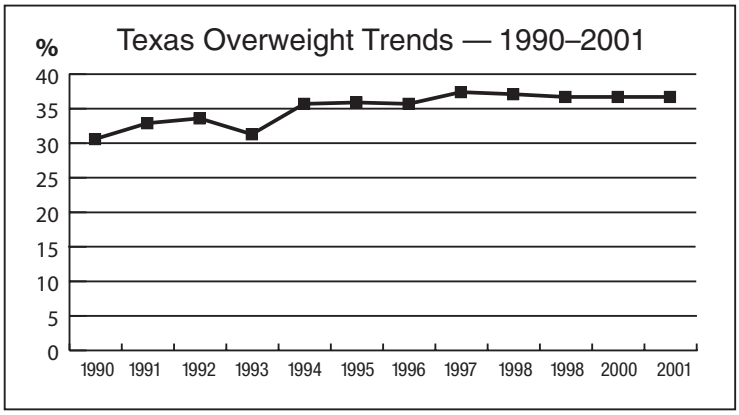
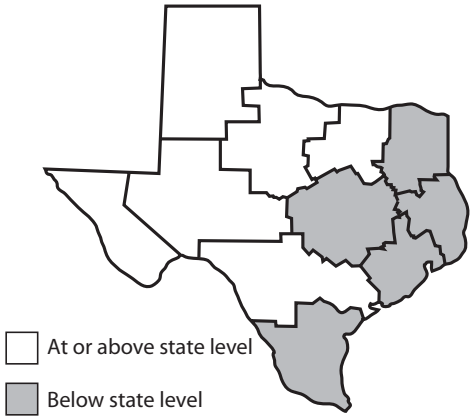
Appendices

Appendix A





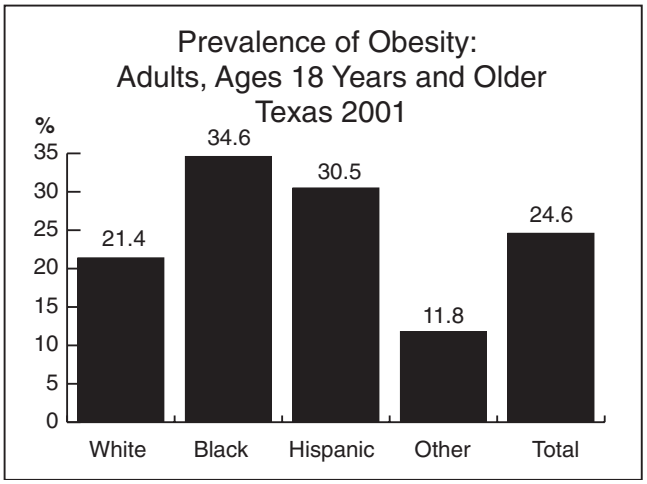
Percent Overweight:
Texas Adults, Ages 18 Years and Older
1999–2001

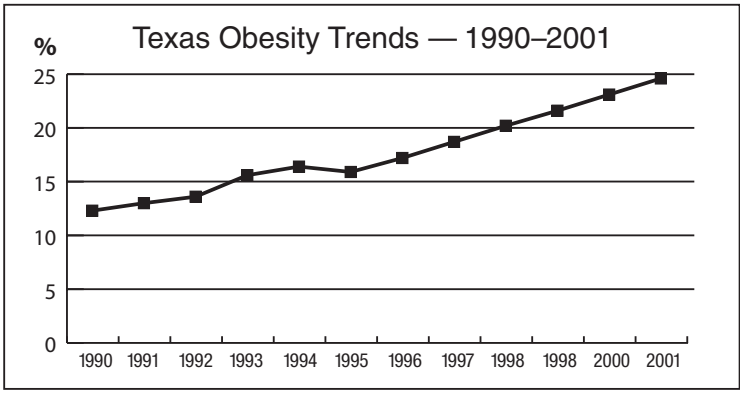


Note: Rates for obesity and overweight are calculated from self-reported data for height and weight. Individuals with a Body Mass Index of at least 25 and less than 30 are classified as overweight. Individuals with a BMI of 30 or greater are classified as obese.

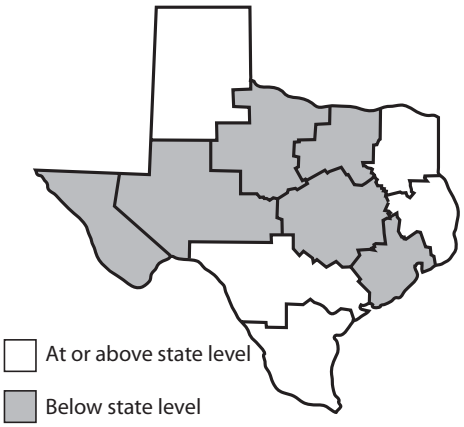
All reported rates are weighted for Texas demographics and the probability of selection, and thus are not derived from the simple division of numerator and denominator cases.

Source: Texas Behavioral Risk Factor Surveillance System, statewide BRFSS survey.





Percent Obese:
Texas Adults, Ages 18 Years and Older
1999–2001



Note: Rates for obesity and overweight are calculated from self-reported data for height and weight. Individuals with a Body Mass Index of at least 25 and less than 30 are classified as overweight. Individuals with a BMI of 30 or greater are classified as obese.

All reported rates are weighted for Texas demographics and the probability of selection, and thus are not derived from the simple division of numerator and denominator cases.

Source: Texas Behavioral Risk Factor Surveillance System, statewide BRFSS survey.

Appendix B

Prevalence of obesity (≥95th percentile for BMI by age/sex) among children in Texas in 2001 (32)

	African American	Hispanic	White/Other*	All
Girls				
4th grade	30.8%	26.4%	13.7%	21.3%
8th grade	23.1%	16.3%	15.3%	16.8%
11th grade	17.1%	19.4%	5.5%	11.7%
Boys				
4th grade	21.6%	31.1%	17.7%	23.6%
8th grade	13.8%	32.6%	15.0%	21.4%
11th grade	19.5%	29.5%	12.7%	19.2%

Prevalence of overweight (≥85th percentile but less than the 95th percentile for BMI by age/sex) and obesity (≥95th percentile for BMI by age/sex) combined for children in Texas in 2001 (32)

	African American	Hispanic	White/Other*	All
Girls				
4th grade	51.7%	39.6%	32.9%	38.3%
8th grade	39.2%	40.7%	34.5%	37.5%
11th grade	44.3%	41.8%	14.0%	27.5%
Boys				
4th grade	45.7%	50.0%	27.6%	39.1%
8th grade	23.9%	49.2%	30.9%	36.8%
11th grade	45.6%	41.9%	21.4%	31.4%
Total				
4th grade	48.7%	44.9%	30.2%	38.7%
8th grade	31.4%	45.0%	32.7%	37.1%
11th grade	44.7%	41.8%	17.7%	29.4%

*White/other category includes non-Hispanic white, Asian, Pacific islander, native American, and “other”

Appendix C

PREVALENCE OF OBESITY IN TEXAS, 1999–2002
Summary of Current Data

Race	Gender	< 12 yrs			≥ 12 yrs			ALL		
Houston (HISD), 2000 (33)		N	> 85th	> 95th	N	> 85th	> 95th	N	> 85th	> 95th
White	Male	405	30.8%	12.1%	582	29.7%	15.7%	968	30.2%	14.2%
	Female	387	29.2%	12.1%	574	21.8%	8.0%	961	24.7%	9.7%
	All	793	30.0%	12.1%	1136	25.6%	11.8%	1929	27.4%	11.9%
African American	Male	384	39.8%	21.9%	281	37.4%	18.1%	885	38.8%	20.3%
	Female	391	44.5%	27.8%	322	49.1%	28.9%	713	46.6%	28.2%
	All	775	42.2%	24.8%	603	43.6%	23.9%	1378	42.8%	24.4%
Hispanic	Male	343	48.7%	28.5%	338	47.6%	26.9%	681	48.2%	27.5%
	Female	372	41.9%	26.3%	380	43.7%	25.0%	752	42.8%	25.7%
	All	715	45.2%	27.4%	718	45.5%	25.9%	1433	45.4%	26.7%
Asian	Male	84	32.1%	15.7%	182	28.5%	12.1%	266	29.7%	13.5%
	Female	72	22.2%	2.8%	186	17.2%	8.5%	258	18.8%	5.4%
	All	156	27.5%	10.3%	368	22.8%	9.2%	524	24.2%	9.5%
All	Male	1217	38.8%	20.1%	1365	35.5%	16.5%	2582	37.1%	19.2%
	Female	1222	37.5%	20.9%	1462	32.8%	18.8%	2684	35.0%	18.7%
	All	2439	38.2%	20.5%	2827	34.1%	17.8%	5266	36.2%	19.2%
Fort Worth ISD (Fifth-Grade Students), 2000 (34)										
White	All	170	23.5%	11.1%				170	23.5%	11.1%
African American	All	250	32.8%	18.0%				250	32.8%	18.0%
Hispanic	All	598	31.9%	15.5%				598	31.9%	15.5%
Asian	All	26	7.7%	7.7%				26	7.7%	7.7%
Other	All	21	19.1%	4.8%				21	19.1%	4.8%
All		1065	29.9%	15.0%				1065	29.9%	15.0%
Hart ISD Castro County, West Texas, 1999 (35)										
82% Hispanic	Male		36.0%	18.7%		37.1%	19.2%			
	Female		47.8%	25.3%		36.5%	19.5%			
	All		41.9%	22.0%		36.9%	19.4%	308	39.4%	20.7%
Texas Rio Grande Valley (Lacar), 2000 (36)										
95.8% Hispanic	Male					40.7%	23.6%		40.7%	23.6%
	Female					39.5%	20.8%		39.5%	20.8%
	All				4375	40.1%	22.1%	4375	40.1%	22.1%
El Paso County (UTEP), 1997–2000 (37)										
All	Male	468	34.0%	20.0%				468	34.0%	20.0%
	Female	431	30.0%	16.0%				431	30.0%	16.0%
	All	899	32.0%	18.0%				899	32.0%	18.0%
Texas Youth Risk Behavior Survey (self-reported), 2001 (38)										
White	All				1663	11.5%	10.9%			
African American	All				1661	19.9%	17.3%			
Hispanic	All				2882	17.8%	17.6%			
Other	All				270					
All	Male				3122	15.1%	19.4%	3122	15.1%	19.4%
	Female				3379	14.4%	8.7%	3379	14.4%	8.7%
	All				6501	14.8%	14.2%	6501	14.8%	14.2%
Texas-Mexico Border (ANTES Project), 2000 (39)										
98% Hispanic	All				3025	53.8%	37.6%	3025	53.8%	37.6%
Texas WIC (Ages 2 to 5), 2002 (40)										
All	All	308,122		14.0%						
TOTAL OF ALL STUDIES (AGES 6–18) – no self-reported data								14938	38.6%	22.1%

2/03

Designed by the Health Communications Division.